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Vol. 4, No. 6

The Advisor

Nov/Dec 2006

A York County Newsletter for Professional Horticulturists And Workers in the Green Industry

2006 Calendar of Events

Nov 3	**Chesapeake Conservation Landscaping Council Fall Conference - "Turning a New Leaf" -** Sustainable Landscaping, Bethesda, MD. www.chesapeakelandscape.org/2006leaf.htm
Nov 7	**Landscapers Best Management Practices,** 8am-10am, York County Public Library, Yorktown, VA, ex199@vt.edu
Nov 8-11	**Tree Care Industry (TCI) Expo 2006,** Baltimore, MD. www.treecareindustry.org/public/meetings_tci_expo.htm
Nov 13-16	**Garden Centers of America Holiday Tour 2006,** Chicago, IL. 1-888-648-6463 www.gardencentersofamerica.org/displaycommon.cfm?an=1&subarticlenbr=12
Nov 15-19	**The Pacific Rose Bowl Festival and Rose Trials,** Hamilton Gardens, Waikato, New Zealand. www.hamiltongardens.co.nz/index.asp?pageID=2145827371 Contact: pacificrosebowl@hotmail.com
Nov 17-19	**Independent Plant Breeder's Conference,** Orlando, FL. www.conference.ifas.ufl.edu/IPBC/index.html
Nov 28	**Va. Pesticide Applicator Municipal Employee Re-Certification,** Rose Hall, Norfolk Botanical Gardens
Dec 3-6	**4th International Symposium on Seed, Transplant and Stand Establishment of Horticultural Crops,** *"Translating seed and seeding physiology into technology,"* San Antonio, TX. http://sest2006symposium.tamu.edu/
Dec 5	**Landscapers Best Management Practices,** 8am-10am, York County Public Library, Yorktown, VA, ex199@vt.edu
2007	
Jan 4-5	**Mid-States Horticultural Expo,** Louisville, KY. www.mshe.org
Jan 4-6	**Northeast Region American Society of Horticultural Science**, University of Maryland, College Park, MD. www.ashs.org/regional/northeast07.html or e-mail Carolyn DeMoranville at carolynd@umext.umass.edu.
Jan 11-13	**The Mid-Atlantic Nursery Trade Show (MANTS),** Baltimore, MD. www.mants.com
Jan 25-27	**IPM Essen - 2007 International Trade Fair for Plants,** Essen, Germany. http://ipm.messe-essen.de/index.php?lang=en
Feb 6	**Landscapers Best Management Practices,** 8am-10am, York County Public Library, Yorktown, VA, ex199@vt.edu
Feb 15-18	**Virginia Flower and Garden Show,** Theme: Dream Gardens, Virginia Beach Convention Center
Mar 10	**Horticultural Extravaganza,** Tabb High School, Rt 17, York County. www.yorkcounty.gov/vce
Mar 21	**Virginia Pesticide Applicator training**, Chesapeake Library
Mar 23	**Virginia Pesticide Applicator training**, Va. Beach Library
Jun 20	**Virginia Pesticide Applicator training**, Norfolk Botanical Gardens
Aug 9-11	**SNA 2007, *"The Worlds Showcase of Horticulture"*®** Atlanta, GA www.sna.org/
Jul 16-19	**American Society for Horticultural Science Annual Conference**, Scottsdale, AZ. www.ashs.org/conferences.html
Aug 23-25	**Farwest Show**, Oregon Convention Center, Portland, OR. www.farwestshow.com

DOLLARS & SENSE

FLORICULTURE AND NURSERY & CROPS OUTLOOK

USDA's Economic Research Service forecasts a modest 2-percent gain in sales of greenhouse and nursery crops for 2006. From $16.2 billion in 2005, ornamental crop sales are projected to reach $16.5 billion in 2006—$100 million from floriculture and $200 million from nursery crops. Among floriculture crops, sales of foliage plants are projected up 4%, herbaceous perennials by 3%, and propagative material by 2%. As an indicator of demand for ornamental crops, sales per U.S. household will be about $147 (at wholesale) for domestic crops in 2006, up from $146 in 2005. These expected gains in sales are hardly sufficient to cover increased grower costs. Complete report is at:
www.ers.usda.gov/Publications/Flo/2006/09Sep/FLO05.pdf

TEMPORARY FIX TO THE H-2B CAP

National Defense Authorization Act for FY2007 (NDAA FY07) allows workers who entered the U.S. with an H-2B visa during FY 2004, 2005 or 2006 to enter the U.S. under an H-2B visa and not count against the 66,000 per year cap. Language for a two-year temporary fix was added by Virginia's Senator Warner. The H-2B visa enables US businesses and agents to fill temporary needs for nonimmigrant workers.

TOP DOZEN OSHA CITATIONS

The top twelve violations cited by OSHA combined for SICs 018 (Horticultural Specialties), 0780 (Landscape and Horticultural Services) from Oct 05 to Sep 06 for companies with 1-99 employees are:

Standard	Description
19100132	General requirements.
19100067	Vehicle-mounted elevating and rotating work platforms.
19101200	Hazard Communication.
5A0001	General Duty Paragraph
19100095	Occupational noise exposure.
19100133	Eye and face protection.
19100135	Head protection.
19100147	The control of hazardous energy (lockout/tagout).
19100157	Portable fire extinguishers.
19100305	Wiring methods, components, & equipment for general use.
19100106	Flammable and Combustible Liquids.
19100333	Selection and Use of Work Pratices.

During this period OSHA conducted 294 inspections, found 385 violations and levied $304,117 in penalties.
http://www.osha.gov/pls/imis/citedstandard.html

HOLIDAY SALES SLOWDOWN FORECAST

After two robust years of holiday sales growth, Retail Forward expects retail sales to slip to a more moderate pace in the 2006 holiday period. Retail Forward's forecast is for 5.5% year-over-year growth in the fourth quarter – down from 7.2% for last year.
www.retailforward.com/pressroom/pressreleases.asp#

THE FIRST LADY'S ROSE SERIES

The Laura Bush Rose was unveiled Oct 1st in The First Lady's Garden at The White House. Mrs. Bush selected the rose as part of the First Ladies Rose Series and it joins roses named for First Ladies Nancy Reagan, Barbara Bush and the soon to debut, Lady Bird Johnson. The White House release describes this floribunda as light yellow buds that open to a smoky coral color with yellow on the reverse petal, while breeder Jackson & Perkins with dusky orange buds burst into ruffled, cinnamon-orange blooms splashed with yellow centers and a delightful fruity aroma.
www.whitehouse.gov/news/releases/2006/10/images/20061002-4_p100206sc=0080-515h.html and www.jacksonandperkins.com

ORDERING HOSTAS FOR NEXT SEASON? NEED INFO?

Consider these picks by:

Garden Gate Magazine[1]	*Green Profits Readers*[2]
'Sum and Substance' (2004)	'Francee'
'June'(2001)	'Frances Williams'
'Halcyon'	'Royal Standard'
'Patriot'(1997)	'Big Daddy'
'Cutting Edge'	'Elegans'
'Blue Mouse Ears'	'Paul's Glory'(1999)
'Little Sunspot'	'Auero Marginata'
'Krossa Regal'	'Wide Brim'
'Sagae'(2000)	'Striptease'(2005)
'Revolution'	(YEAR) detonates designation as "Hosta of Year" by the American Hosta Grower's Association
'One Man's Treasure'	
'Sun Power'	

[1] *Garden Gate, Sep/Oct 2006, Issue 71, p.16-23*
[2] www.greenprofit.com/archive/articles/2030.asp

Missing from these two lists are the American Hosta Grower's Association's "Hosta of The Year" 'Stained Glass'(2006), 'Regal Splendor'(2003), 'Guacamole'(2002) 'Fragrant Bouquet'(1998), and 'So Sweet'(1997).
Garden Gate has pictures & information about their picks and hosta care information. Also visit these web sites:
www.hosta.org American Hosta Association
www.hostalibrary.org by hosta enthusiasts
www.shadyoaks.com Shady Oaks Nursery

PESTICIDE VIOLATIONS NOW POSTED ONLINE

Both consumers and the pest control industry now have a more substantive basis for making decisions when choosing a pest control company or an employee. The new online pesticide violations database allows searchs by business name or location, applicator's name, the type of violation, violation date or penalty amount and status. Click here to access the database.
www.vdacs.virginia.gov/news/releases-a/063006pestviolation.shtml

F.Y.I

BUTTERFLIES WITH HIGH TECH LEDS

When MIT scientists developed an efficient high emission light emitting diode (LED), they hadn't realized butterflies have been using the same method for 30 million years. Scientists in UK recently discovered African *Princeps nireus* swallowtail butterflies with fluorescent patches on their wings that use the same optical mechanism to flash mating and territorial signals

The bright blue or blue-green fluorescent patches on their wings work in a very similar way to LEDs. These wing scales act as 2D photonic crystals, infused with pigment and structured in such a way that they produce intense fluorescence. Pigment on the butterflies' wings absorbs ultra-violet light, which is then re-emitted, using fluorescence, as brilliant blue-green light. Dr Vukusic told the BBC News website "Unlike the diodes, the butterfly's system clearly doesn't have semiconductor in it and it doesn't produce its own radiative energy. That makes it doubly efficient in a way. But the way light is extracted from the butterfly's system is more than an analogy - it's all but identical in design to the LED." The University of Exeter, UK, research appears in the journal Science. *Science* 18 November 2005: Vol. 310. No. 5751, p. 1151
www.sciencemag.org/cgi/content/abstract/310/5751/1151
http://news.bbc.co.uk/2/hi/science/nature/4443854.stm

AHS PICKS TEN TOUGH NATIVE DECIDUOUS TREES

The American Horticultural Society's magazine, *The American Gardener,* Sep/Oct 2006 issue, lists ten tough native deciduous trees worth considering. If you are going to plant one, try to find one that was propagated locally or in the region. Even though in the same genus, trees do vary from region to region. Also check for Virginia Tech's recommendations. Now AHS's list:

Scientific Name	**Common Name**
Betula nigra	River Birch
Quercus macrocarpa	Bur Oak
Celtis occidentalis	American Hackberry
Gymnocladus dioicus	Kentucky Coffeetree
Ostrya virginiana	Ironwood
Cotinus obovatus	American Smoketree
Sassafras albidum	Sassafras
Populus grandidentata	Bigtooth Aspen
Maclura pomifera	Osage Orange

AHS adds the following trees for Northeast & Southeast

Quercus ruba	Northern Red Oak
Betula alleghaniensis	Yellow Birch
Quercus alba	White Oak
Carya ovata	Shagbark Hickory
Leitneria floridana	Corkwood
Quercus phellos	Willow Oak

WHY DO THE LEAVES CHANGE COLOR?
FOLLOW-UP: DIFFERING VIEWS… .

The previous issue of *The Advisor* presented an explaination of why leaves change colors in the fall. A review of the published research in recent years provides compelling evidence that the answers are far, far more complex –the leaf color show is not for us.

Rather this is part of a complex Darwinian dance to enhance not only the survial of a tree, but to also gain an advantage in its competion for space (sunlight) and nuturants leading to enhancement of and even the dominance of a species. Some research associates intensity of leaf color as a visual warning to insects – stay away, don't lay eggs here or the lavae wil die in the spring from poisons made by the tree (the co-evolutionary hypothesis). Whereas the photoprotection hypothesis posits that the colors become sunscreen to protect the leaves against photoinhibitation due to colder weather and to enhance nutrient transfer and recovery before the leaves die. Some scientists are beginning to conclude, just maybe it might be both.

Hoch, Singsass, and McCown; "Resorption Protection" *Plant Physiology,* Vol. 133, pp. 1296-1305 Nov 2003.
Archetti and Leather, "A Test of the Coevolution theory of Autumn Colors, *OIKOS* Vol 110, Issue 2, pp 339-343 Aug 2005.
Schaefer and Rolshausen, "Plants on red alert: do insects pay attention?, *BioEssays,* Vol 28, Issue 1, pp 65-71, Dec 2005.
Rolshausen and Schaefer, Plant Ecology, Online Oct 17, 2006. www.springerlink.com/content/y08186732911525q
Milius, "Why Turn Red?, *Science News,* Vol 162, No 17, Oct 26, 2002, p. 264. www.sciencenews.org/articles/20021026/bob8.asp

EDUCATIONAL RESOURCES

MID-ATLANTIC HORTICULTURE SHORT COURSE

Plan now to attend the 2007 Mid-Atlantic Horticulture Short Course, to be held in Virginia Beach, Jan 29 – Feb 1, 2007. This is a comprehensive educational program with one, two, three and four-day tracks. Courses are specially designed by national and regional experts in the horticulture industry. Educational credits are given for many of the various horticulture disciplines. Details on the web at www.mahsc.org -- Check it out; register early!

PESTICIDE APPLICATOR RECERTIFICATION COURSES

Calendar of Courses through March 2007- Planned or Pending Approval for Recertification of Virginia Certified Commercial Pesticide Applicators is now posted on the VDACS website at www.vdacs.virginia.gov/pesticides/pending.shtml.

The Advisor Newsletter **is prepared by:**
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York County Master Gardener, in conjunction with

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FEATURE ARTICLES

THE RACE FOR A NEW MONOCOT MODEL PLANT

A review of press releases, scientific journels, and symposia abstracts implies a race between U.S. Dept of Engery Joint Genome Institute's team (DOE JGI) and teams from United Kingdom, Denmark, Poland and France genetic sequence the temperate wild grass species *Brachypodium distachyon* (*Brachypodium*). And there may be other organizations and companies competing as well. The winner may determine control of *Brachypodium* as a new model plant for temperate grasses and herbaceous energy crops. Temperate grass species such as wheat, barley, and forage grasses underpin our food supply. However, the size and complexity of their genomes is a major barrier to biotechnological improvement. Similarly, while herbaceous energy crops (especially grasses such as switchgrass (think ethanol)) are poised to become a major source of renewable energy in the United States, we know very little about the biology of traits that affect their utility for energy production. Thus a tractable temperate grass model is urgently needed to address questions directly relevant both for improving grain crops and forage grasses that are indispensable to our food production systems, and for developing grasses into superior energy crops. Neither of the existing plant models, rice (a monocot) nor *Arabidopsis* (a dicot), adequately fits this role. The monocot class includes the world's most important food crops – wheat, corn, oats, rice – as well as forage grasses for animal agriculture and turf grasses for lawns. *Brachypodium's* genome could open the door to revolutionary new discoveries for everything from improved ethanol production to advances in wheat, corn and turfgrass.

Brachypodium is closely related to the cool-season grasses and is an emerging model system for the diverse and economically important grain, forage and turf crops that these groups encompass. The small *Brachypodium* genome can be used as an accurate template for the much larger polyploid genomes of crops such as wheat and barley. Moreover, since *Brachypodium* is inbreeding, small in stature, can be grown rapidly, and is amenable to transformation it can be used as a functional model to gain the knowledge about basic grass biology necessary to develop superior energy crops. This combination of desirable attributes underlies the burgeoning research interest in the species. A whole-genome shotgun sequence (WGS) of the *Brachypodium* Bd21 genome, supplemented by a complete set of expressed sequence tags (ESTs), will be a cornerstone resource for a vigorous research community seeking to promote the development of new energy crops and to contribute to global food security.

www.jgi.doe.gov/sequencing/why/CSP2007/brachypodium.html
www.jgi.doe.gov/education/bioenergy/bioenergy_12.html
/www.gcsaa.org/newsweekly/this_week/industry.asp#research
www.brachypodium.org/
www.intl-pag.org/14/abstracts/PAG14_W14.html
2006 Plant & Animal Genome XIV Conference Brachypodium distachyon Workshop Abstracts

EMERALD ASH BORER (EAB) UPDATE

PHOTO BY: DAVID CAPPAERT, MICHIGAN STATE UNIVERSITY

PHOTO BY: BRIAN SULLIVAN, USDA APHIS PPQ

In August 2006, Maryland Department of Agriculture (MDA) found the EAB, *Agrilus planipenis, near* the original infestation in Prince George County, which was thought to have been eradicated. MDA immediately issued a Quarantine Order (#06-01) that prohibits anyone from moving ash trees or hardwood firewood into or out of Prince George County until further notice.

Virginia examined their detection trees for the 2006 season, but found no EAB.

In 2003, a Michigan nursery owner violated federal quarantine laws by shipping infested ash trees to a nursery in Prince George's County, MD, which in turn sold 16 of the trees to Fairfax County Public Schools. These trees were removed in the hopes of preventing infestations from developing. Maryland and Virginia continued to trap with sentinel trees and had no detections until September 2006 when Maryland discovered EAB in southern Prince George's County during ongoing survey and eradication activities begun after the detection of the insect in Maryland in 2003.

This non-native pest poses an enormous threat to our urban and rural forests. EAB kills healthy trees and is so aggressive that ash trees may die within two or three years after they become infested with the beetle. If it is not contained and eradicated, the impact of Emerald Ash Borer beetle attacks on ash in North America will be similar to that of the devastation from two fungal diseases, Chestnut Blight and Dutch Elm Disease.

Here is what to look for:

- Look for D-shaped holes in the trunks of green & white ash
- Rapid dieback of ash tree and formation of witch's brooms
- Shaped galleries under bark that is packed with frass
- Presence of small, slender green colored beetle with a brassy underside

If you see these signs or symptoms contact USDA APHIS at 1-866-322-4512, VDACS, or your Extension office and alert them about the site. We cannot emphasize the importance of destroying this pest rapidly and preventing this pest from becoming established in our area or it will be deadly for Ash trees.

The areas infested with EAB already exceed 40,000 square miles in Michigan; Indiana; Ohio and Ontario.

www.aphis.usda.gov/ppq/ep/eab/index.html
www.emeraldashborer.info/index.cfm
www.fairfaxcounty.gov/dpwes/environmental/eab_general.htm
www.mdarborist.com/News.htm